

## B. Summary of Existing Requirements and Self-Monitoring Report (SMR) Data

Effluent limitations contained in the existing Order for discharges from Discharge Point 001 (Monitoring Location EFF-001) and representative monitoring data from the term of the previous Order are as follows:

**Table F-2. Historic Effluent Limitations and Monitoring Data**

Parameter	Units	Effluent Limitation		Monitoring Data (From Feb. 12, 2003 –To Feb. 19, 2005)	
		Average Monthly	Maximum Daily	Highest Average Monthly Discharge	Highest Daily Discharge
pH	units	--	Inst. Min = 6.5, Inst. Max = 8.5	--	Inst. Min = 6.21, Inst. Max = 8.03
Temperature	°F	--	Instantaneous Max = 100	66	66
Acute Toxicity	% survival	--	90%	--	100%
Total suspended solids	mg/L	50	75	160	240
Turbidity	NTU	50	75	349.5	600
Settleable solids	ml/L	0.1	0.3	<0.1	<0.1
BOD <sub>5</sub> 20°C	mg/L	20	30	4.3	4.3
Oil and grease	mg/L	10	15	6.00 <sup>1</sup>	7.00
Sulfides	mg/L	--	1.0	<0.1	<0.1
Phenols <sup>2</sup>	mg/L	--	1.0	<0.1	<0.1
Hardness	mg/L	--	--	27	27
Specific Conductance	umhos/cm	--	--	260	270
Surfactants (MBAS)	mg/L	--	--	0.63	0.63
Total Organic Carbon	mg/L	--	--	10	10
Dissolved Oxygen	mg/L	--	--	7.95	8.60
Ammonia	mg/L	--	--	0.745 <sup>3</sup>	0.99
Arsenic	µg/L	--	--	28.5	45
Cadmium	µg/L	--	--	2 <sup>4</sup>	3.0
Chromium (VI)	µg/L	--	--	0.058	0.058
Total Chromium	µg/L	--	--	17.7	26.0
Copper	µg/L	--	--	23	29
Lead	µg/L	--	--	320	500

Parameter	Units	Effluent Limitation		Monitoring Data (From Feb. 12, 2003 –To Feb. 19, 2005)	
		Average Monthly	Maximum Daily	Highest Average Monthly Discharge	Highest Daily Discharge
Mercury (mg/L)	mg/L	--	--	0.00134	0.00134
Nickel	µg/L	--	--	21.5	33
Selenium	µg/L	--	--	2.55 <sup>5</sup>	3.1
Zinc	µg/L	--	--	925	1200

<sup>1</sup> This value represents the average of 2 data points <5.0 and 7.0 from January 7 and January 10, 2005.

<sup>2</sup> Reported as Phenolics in monitoring data.

<sup>3</sup> This value represents the average of 2 data points 0.99 and <0.5 from December 6 and December 28, 2004.

<sup>4</sup> This value represents the average of 2 data points <1.0 and 3.0 from October 20 and October 27, 2004.

<sup>5</sup> This value represents the average of 2 data points 3.1 and <2.0 from December 6 and December 28, 2004.

Effluent data reported on the permit renewal application are summarized in the following table:

**Table F-3. Effluent Characteristics Reported With ROWD**

Parameter	Units	Maximum Daily	Long Term Average
Biochemical Oxygen Demand	mg/L	4.3	2.26
Biochemical Oxygen Demand	kg	4.9	0.08
Chemical Oxygen Demand	mg/L	34	34
Chemical Oxygen Demand	kg	38.6	1.2
Total Organic Carbon	mg/L	10	5.2
Total Organic Carbon	kg	11.4	0.18
Total Suspended Solids	mg/L	240	62.75
Total Suspended Solids	kg	272	2.26
Ammonia (as N)	mg/L	0.99	0.36
Ammonia (as N)	kg	1.1	0.01
Flow	gpd	300,000	9,500
Temperature (winter)	°C	17.2	14.4
Temperature (summer)	°C	24.4	24.4
pH	su	8.08 <sup>1</sup>	6.67 <sup>2</sup>
Oil and Grease	mg/L	7.0	3.0
Oil and Grease	kg	7.9	0.1
Surfactants	mg/L	0.63	<0.10
Surfactants	kg	0.7	<0.003
Arsenic, Total	µg/L	45.0	23.5
Arsenic, Total	g	51.1	0.8
Chromium, Total	µg/L	26.0	10.77
Chromium, Total	g	29.5	0.4
Copper, Total	µg/L	28.0	15.85
Copper, Total	g	31.8	0.6

Parameter	Units	Maximum Daily	Long Term Average
Lead, Total	µg/L	500.0	209.0
Lead, Total	g	567.8	7.5
Nickel, Total	µg/L	33.0	12.1
Nickel, Total	g	37.4	0.4
Zinc, Total	µg/L	150	101.25
Zinc, Total	g	<170.3	36.4

<sup>1</sup> The Discharger reported this value as a maximum.

<sup>2</sup> The Discharger reported this value as a minimum.

Further, the Discharger indicated in section V of USEPA Form 2C that the following pollutants are known or there is reason to believe to be discharged or may be discharged from any outfall: Cresol, methyl mercaptan, naphthenic acid, xylene, and cyclohexane (components of crude petroleum and/or some refined products).

### C. Compliance Summary

Data submitted to the Regional Water Board indicate that the Discharger has exceeded existing permit limitations as outlined in the table below:

**Table F-4. Summary of Compliance History**

Date	Monitoring Period	Violation Type	Pollutant	Reported Value	Permit Limitation	Units
02/23/2004	1 <sup>st</sup> Quarter, 2004	Daily Max Avg Monthly	Total Suspended Solids	160	75 50	mg/L
02/23/2004	1 <sup>st</sup> Quarter, 2004	Daily Max Avg Monthly	Turbidity	91	75 50	NTU
03/02/2004	1 <sup>st</sup> Quarter, 2004	Daily Max Avg Monthly	Total Suspended Solids	51	75 50	mg/L
03/02/2004	1 <sup>st</sup> Quarter, 2004	Daily Max Avg Monthly	Turbidity	66	75 50	NTU
12/28/2004	4 <sup>th</sup> Quarter, 2004	Daily Max	Turbidity	92	75	NTU
12/2004	4 <sup>th</sup> Quarter, 2004	Avg Monthly	Turbidity	69.5*	50	NTU
02/12/2005	1 <sup>st</sup> Quarter, 2003	Daily Max	Turbidity	99	75	NTU
02/19/2005	1 <sup>st</sup> Quarter, 2005	Daily Max	Total Suspended Solids	240	75	mg/L
02/19/2005	1 <sup>st</sup> Quarter, 2005	Daily Max	Turbidity	600	75	NTU
02/2005	1 <sup>st</sup> Quarter, 2005	Avg Monthly	Total Suspended Solids	143*	50	mg/L
02/2005	1 <sup>st</sup> Quarter, 2005	Avg Monthly	Turbidity	349.5*	50	NTU

\* Calculated from additional discharge data reported in monthly discharge monitoring report.

These violations are being evaluated for appropriate enforcement actions.

In the 1<sup>st</sup> Quarter 2005 DMR, the Discharger stated that Valero believes that the data for 02/19/2005 of 600 NTU for Turbidity and 240 mg/L of suspended solids are not representative of the actual storm water that was discharged due to improper sampling techniques and selection of the sampling location. Valero has selected to temporarily cease storm water discharges from this facility, until additional improvements have been made to improve the quality of the storm water discharges.

In the 2005 Annual Summary Report, the discharger stated that Valero attributes the following factors to the overall exceedence of the limits: (1) the fact that majority of the Olympic Tank Farm site may allow soils to co-mingle with storm water; and (2) the rapid discharges of the storm water may have reduced the detention time of solids in the separator. During 2005, Valero modified the final discharge separator's inlet to reduce soil/debris from entering the separator. Valero will continue with its Best Management Practice of cleaning the final discharge separator on a routine basis, as well as continue to attempt to increase the solids detention time in the separators prior to the discharge by controlling the inflow rate.

### **III. APPLICABLE PLANS, POLICIES, AND REGULATIONS**

The requirements contained in the proposed Order are based on the requirements and authorities described in this section.

#### **A. Legal Authorities**

This Order is issued pursuant to section 402 of the federal Clean Water Act (CWA) and implementing regulations adopted by the U.S. Environmental Protection Agency (USEPA) and chapter 5.5, division 7 of the California Water Code (commencing with section 13370). It shall serve as a NPDES permit for point source discharges from this facility to surface waters. This Order also serves as Waste Discharge Requirements (WDRs) pursuant to article 4, chapter 4, division 7 of the Water Code (commencing with section 13260).

#### **B. California Environmental Quality Act (CEQA)**

Under Water Code section 13389, this action to adopt an NPDES permit is exempt from the provisions of CEQA, Public Resources Code sections 21100 through 21177.

#### **C. State and Federal Regulations, Policies, and Plans**

1. **Water Quality Control Plans.** The Regional Water Quality Control Board (Regional Water Board) adopted a Water Quality Control Plan for the Los Angeles Region (hereinafter Basin Plan) on June 13, 1994 that designates beneficial uses, establishes water quality objectives, and contains implementation programs and policies to achieve those objectives for all waters addressed through the plan. Beneficial uses applicable to the Dominguez Channel estuary are as follows:

**Table F-5. Basin Plan Beneficial Uses**

Discharge Point	Receiving Water Name	Beneficial Use(s)
001	Dominguez Channel Estuary	<p><u>Existing:</u> water contact recreation; non-contact recreation; commercial and sport fishing; estuarine habitat; marine habitat; wildlife habitat; rare, threatened or endangered species; migration of aquatic organisms; and spawning, reproduction, and/or early development.</p> <p><u>Potential:</u> navigation.</p>

Requirements of this Order implement the Basin Plan.

The Water Quality Control Policy for the Enclosed Bays and Estuaries of California (Enclosed Bay and Estuaries Policy), adopted by the State Water Resources Control Board (State Board) as Resolution No. 95-84 on November 16, 1995, states that:

*"It is the policy of the State Board that the discharge of municipal wastewaters and industrial process waters (exclusive of cooling water discharges) to enclosed bays and estuaries, other than the San Francisco Bay-Delta system, shall be phased out at the earliest practicable date. Exceptions to this provision may be granted by a Regional Board only when the Regional Board finds that the wastewater in question would consistently be treated and discharged in such a manner that it would enhance the quality of receiving waters above that which would occur in the absence of the discharge."*

While the discharge from the Olympic Tank Farm discharges into the Dominguez Channel, within the Estuary, the wastewater is comprised primarily of stormwater and fire protection test water, and therefore are not considered to be industrial process wastewater. Nonetheless, this Order contains provisions necessary to protect all beneficial uses of the receiving water.

2. Thermal Plan. The State Water Board adopted a Water Quality Control Plan for Control of Temperature in the Coastal and Interstate Water and Enclosed Bays and Estuaries of California (Thermal Plan) on May 18, 1972, and amended this plan on September 18, 1975. This plan contains temperature objectives for surface waters. Requirements of this Order implement the Thermal Plan.
3. Ammonia Basin Plan Amendment. The 1994 Basin Plan provided water quality objectives for ammonia to protect aquatic life, in Tables 3-1 through 3-4. However, those ammonia objectives were revised on March 4, 2004, by the Regional Water Board with the adoption of Resolution No. 2004-022, *Amendment to the Water Quality Plan for the Los Angeles Region to Update the Ammonia Objectives for Inland Surface Waters Not Characteristic of Freshwater (including enclosed bays, estuaries and wetlands) with the Beneficial Use designations for protection of "Aquatic Life"*. The ammonia Basin Plan amendment was approved by the State Water Board on July 22, 2004, Office of Administrative Law on September 15, 2004, and by USEPA on May 19, 2005. The amendment revised the Basin Plan by updating the ammonia objectives for inland surface waters not characteristic of

freshwater such that they are consistent with USEPA's "*Ambient Water Quality Criteria for Ammonia (Saltwater) – 1989*." The amendment revised the regulatory provisions of the Basin Plan by adding language to Chapter 3, "Water Quality Objectives".

For inland surface waters not characteristic of freshwater (including enclosed bays, estuaries, and wetlands), the proposed objectives are a 4-day average concentration of unionized ammonia of 0.035 mg/L, and a one-hour average concentration of unionized ammonia of 0.233 mg/L. The proposed objectives are fixed concentrations of unionized ammonia, independent of pH, temperature, or salinity. The proposed amendment includes an implementation procedure to convert un-ionized ammonia objectives to total ammonia effluent limits. The proposed amendment also simplifies the implementation procedures for translating ammonia objectives into effluent limits in situations where a mixing zone has been authorized by the Regional Board. Finally, the proposed amendment revises the implementation procedure for determining saltwater, brackish or freshwater conditions, to be consistent with the proposed objectives. The proposed objectives will apply only to inland surface waters not characteristic of freshwater (including enclosed bays, estuaries and wetlands).

4. National Toxics Rule (NTR) and California Toxics Rule (CTR). USEPA adopted the NTR on December 22, 1992, and later amended it on May 4, 1995 and November 9, 1999. About forty criteria in the NTR applied in California. On May 18, 2000, USEPA adopted the CTR. The CTR promulgated new toxics criteria for California and, in addition, incorporated the previously adopted NTR criteria that were applicable in the state. The CTR was amended on February 13, 2001. These rules contain water quality criteria for priority pollutants.
5. State Implementation Policy. On March 2, 2000, the State Water Board adopted the *Policy for Implementation of Toxics Standards for Inland Surface Waters, Enclosed Bays, and Estuaries of California* (State Implementation Policy or SIP). The SIP became effective on April 28, 2000, with respect to the priority pollutant criteria promulgated for California by the USEPA through the NTR and to the priority pollutant objectives established by the Regional Water Board in the Basin Plan. The SIP became effective on May 18, 2000, with respect to the priority pollutant criteria promulgated by the USEPA through the CTR. The State Water Board adopted amendments to the SIP on February 24, 2005, that became effective on July 13, 2005. The SIP establishes implementation provisions for priority pollutant criteria and objectives and provisions for chronic toxicity control. Requirements of this Order implement the SIP.
6. Alaska Rule. On March 30, 2000, USEPA revised its regulation that specifies when new and revised state and tribal water quality standards (WQS) become effective for CWA purposes (40 C.F.R. § 131.21, 65 Fed. Reg. 24641 (April 27, 2000)). Under the revised regulation (also known as the Alaska rule), new and revised standards submitted to USEPA after May 30, 2000, must be approved by USEPA before being used for CWA purposes. The final rule also provides that standards already in effect and submitted to USEPA by May 30, 2000, may be used for CWA purposes, whether or not approved by USEPA.

7. Antidegradation Policy. Section 131.12 requires that the state water quality standards include an antidegradation policy consistent with the federal policy. The State Water Board established California's antidegradation policy in State Water Board Resolution No. 68-16, which incorporates the requirements of the federal antidegradation policy. Resolution No. 68-16 requires that existing water quality is maintained unless degradation is justified based on specific findings.

This NPDES permit includes effluent limits to ensure that the discharge does not adversely impact the beneficial uses of Dominguez Channel or degrade water quality. The inclusion of the effluent limits and prohibitions in the NPDES permit, which ensure that any discharge would not result in the lowering of water quality, coupled with the fact that the discharge occurs infrequently and is temporally limited, support the conclusion that no degradation will arise as a result of reissuing this permit. The issuance of this permit, therefore, is consistent with the state's antidegradation policy.

8. Anti-Backsliding Requirements. Sections 402(o)(2) and 303(d)(4) of the CWA and federal regulations at title 40, Code of Federal Regulations<sup>1</sup> section 122.44(l) prohibit backsliding in NPDES permits. These anti-backsliding provisions require that effluent limitations in a reissued permit must be as stringent as those in the previous permit, with some exceptions in which limitations may be relaxed. The reissued permit is more stringent than the previous permit.

#### D. Impaired Water Bodies on CWA 303(d) List

Section 303(d) of the CWA requires states to identify specific water bodies where water quality standards are not expected to be met after implementation of technology-based effluent limitations on point sources. For all 303(d)-listed water bodies and pollutants, the Regional Water Board plans to develop and adopt TMDLs that will specify WLAs for point sources and load allocations (LAs) for non-point sources, as appropriate.

The 2006 CWA Section 303(d) List of Water Quality Limited Segment, Los Angeles Regional Water Quality Control Board, approved by EPA on June 28, 2007, lists the Dominguez Channel estuary (unlined portion below Vermont Avenue) (CAL Watershed 40512000). The pollutants/stressors listed include: ammonia, benthic community effects, benzo(a)pyrene, benzo(a)anthracene, chrysene, coliform bacteria, chlordane (tissue), DDT (tissue and sediment), dieldrin (tissue), lead (tissue), PCBs, phenanthrene, pyrene, and zinc (sediment). To date no TMDLs have been developed; therefore, no conditions in the tentative Order are based on TMDLs.

#### IV. RATIONALE FOR EFFLUENT LIMITATIONS AND DISCHARGE SPECIFICATIONS

The CWA requires point source dischargers to control the amount of conventional, non-conventional, and toxic pollutants that are discharged into the waters of the United States. The control of pollutants discharged is established through effluent limitations and other requirements in NPDES permits. There are two principal bases for effluent limitations in the Code of Federal Regulations: section 122.44(a) requires that permits include applicable technology-based limitations and standards; and section 122.44(d) requires that permits

<sup>1</sup> All further statutory references are to title 40 of the Code of Federal Regulations unless otherwise indicated.

include water quality-based effluent limitations to attain and maintain applicable numeric and narrative water quality criteria to protect the beneficial uses of the receiving water.

Both storm water and fire prevention system test water are infrequent and intermittent discharges. Therefore, only maximum daily discharge limits are specified.

The pollutants of concern were determined from the limitations from the previous permit (pH, temperature, acute toxicity, total suspended solids, turbidity, settleable solids, BOD5@ 20°C, oil and grease, sulfides, and phenols), as well as parameters which were identified as having the reasonable potential to cause or contribute to an exceedance of a water quality standard (antimony, arsenic, beryllium, cadmium, chromium (III and VI), copper, lead, mercury, nickel, selenium, silver, thallium, zinc, 2,3,7,8 TCDD, methylene chloride, bis(2-ethylhexyl)phthalate, fluoranthene, and phenanthrene). Generally, mass-based effluent limitations ensure that proper treatment, and not dilution, is employed to comply with the final effluent concentration limitations. Section 122.45(f)(1) requires that all permit limitations, standards or prohibitions be expressed in terms of mass units except under the following conditions: (1) for pH, temperature, radiation or other pollutants that cannot appropriately be expressed by mass limitations; (2) when applicable standards or limitations are expressed in terms of other units of measure; or (3) if in establishing technology-based permit limitation on a case-by-case basis limitation based on mass are infeasible because the mass or pollutant cannot be related to a measure of production. The limitations, however, must ensure that dilution will not be used as a substitute for treatment.

#### A. Discharge Prohibitions

The discharge prohibitions are based on the requirements of the Basin Plan, State Water Board's plans and policies, the Water Code, and previous permit provisions, and are consistent with the requirements set for other discharges regulated by NPDES permit to the Dominguez Channel estuary.

#### B. Technology-Based Effluent Limitations

##### 1. Scope and Authority

Section 301(b) of the CWA and implementing USEPA permit regulations at section 122.44, title 40 of the Code of Federal Regulations, require that permits include conditions meeting applicable technology-based requirements at a minimum, and any more stringent effluent limitations necessary to meet applicable water quality standards. The discharge authorized by this Order must meet minimum federal technology-based requirements based on Best Professional Judgment (BPJ) in accordance with Part 125, section 125.3.

The CWA requires that technology-based effluent limitations be established based on several levels of controls:

- a. Best practicable treatment control technology (BPT) represents the average of the best performance by plants within an industrial category or subcategory. BPT standards apply to toxic, conventional, and non-conventional pollutants.



- b. Best available technology economically achievable (BAT) represents the best existing performance of treatment technologies that are economically achievable within an industrial point source category. BAT standards apply to toxic and non-conventional pollutants.
- c. Best conventional pollutant control technology (BCT) represents the control from existing industrial point sources of conventional pollutants including BOD, TSS, fecal coliform, pH, and oil and grease. The BCT standard is established after considering the "cost reasonableness" of the relationship between the cost of attaining a reduction in effluent discharge and the benefits that would result, and also the cost effectiveness of additional industrial treatment beyond BPT.
- d. New source performance standards (NSPS) represent the best available demonstrated control technology standards. The intent of NSPS guidelines is to set limitations that represent state-of-the-art treatment technology for new sources.

The CWA requires USEPA to develop effluent limitations, guidelines and standards (ELGs) representing application of BPT, BAT, BCT, and NSPS. Section 402(a)(1) of the CWA and section 125.3 of the Code of Federal Regulations authorize the use of best professional judgment (BPJ) to derive technology-based effluent limitations on a case-by-case basis where ELGs are not available for certain industrial categories and/or pollutants of concern. Where BPJ is used, the permit writer must consider specific factors outlined in section 125.3

## 2. Applicable Technology-Based Effluent Limitations

This Order includes technology-based effluent limitations based on BPJ in accordance with 40 CFR § 125.3. Effluent limitations for pH, temperature, acute toxicity, total suspended solids, turbidity, settleable solids, BOD<sub>5</sub> 20°C, oil and grease, sulfides, and phenols have been carried over from the existing Order No. R4-2003-0052.

The existing Order required the Discharger to develop and implement a Storm Water Pollution Prevention Plan (SWPPP). This Order will require the Discharger to update and continue to implement, consistent with the existing Order requirements, a SWPPP to outline site-specific management processes for minimizing storm water runoff contamination and for preventing contaminated storm water runoff from being discharged directly into the storm drain. At a minimum, the management practices should ensure that raw materials and chemicals do not come into contact with storm water in the undiked areas, and that all storm water within the diked areas is contained within the diked areas at all times.

Due to the lack of national ELGs for storm water runoff from tank farm facilities, and pursuant to section 122.44(k), the previous Order required the Discharger to develop and implement a Best Management Practices Plan (BMPP). This Order will require the Discharger to update and continue to implement, consistent with the existing Order requirements, a BMPP to establish site-specific procedures that will ensure

proper operation and maintenance of equipment and storage areas, to ensure that unauthorized non-storm water discharges do not occur at the Facility.

The existing Order required the Discharger to update their Spill Contingency Plan (SCP). This Order will require the Discharger to update and continue to implement their SCP. A Spill Prevention Control and Countermeasure Plan (SPCC), developed in accordance with 40 CFR Part 112, may be substituted for the SCP.

The combination of the SWPPP, BMPP, SCP, and existing Order limitations based on past performance and reflecting BPJ will serve as the equivalent of technology-based effluent limitations, in the absence of established ELGs, in order to carry out the purposes and intent of the CWA.

### Summary of Technology-based Effluent Limitations , Discharge Point 001

**Table F-6. Summary of Technology-based Effluent Limitations**

Parameter	Units	Effluent Limitations <sup>1</sup>		
		Maximum Daily	Instantaneous Minimum	Instantaneous Maximum
pH	units	--	6.5	8.5
Temperature <sup>2</sup>	°F	--	--	86
Total suspended solids	mg/L	75	--	--
Turbidity	NTU	75	--	--
Settleable solids	ml/L	0.3	--	--
BOD <sub>5</sub> 20°C	mg/L	30	--	--
Oil and grease	mg/L	15	--	--
Sulfides	mg/L	1.0	--	--
Phenols	mg/L	1.0	--	--

<sup>1</sup> The monthly average concentration shall be the arithmetic average of all the values of daily concentrations calculated using the results of analyses of all samples collected during the month. If only one sample is taken in that month, compliance shall be based on the single sample result.

The mass emission (in lb/day) for the discharge shall be calculated and reported using the limitation concentration and the actual flow rate measured at the time of discharge, using the formula:  $m = 8.34 \times C_1 \times Q$ , where:  $m$  = mass discharge for a pollutant (lb/day),  $C_1$  = limitation concentration for a pollutant (mg/L), and  $Q$  = actual discharge flow rate (mgd)

<sup>2</sup> The maximum temperature of the discharge shall not exceed the natural receiving water temperature by more than 20°F.

### C. Water Quality-Based Effluent Limitations (WQBELs)

#### 1. Scope and Authority

Section 301(b) of the CWA and section 122.44(d) require that permits include limitations more stringent than applicable federal technology-based requirements where necessary to achieve applicable water quality standards.

Section 122.44(d)(1)(i) mandates that permits include effluent limitations for all pollutants that are or may be discharged at levels that have the reasonable potential to cause or contribute to an exceedance of a water quality standard, including numeric and narrative objectives within a standard. Where reasonable potential has been established for a pollutant, but there is no numeric criterion or objective for the pollutant, water quality-based effluent limitations (WQBELs) must be established using: (1) USEPA criteria guidance under CWA section 304(a), supplemented where necessary by other relevant information; (2) an indicator parameter for the pollutant of concern; or (3) a calculated numeric water quality criterion, such as a proposed state criterion or policy interpreting the state's narrative criterion, supplemented with other relevant information, as provided in section 122.44(d)(1)(vi).

The process for determining reasonable potential and calculating WQBELs when necessary is intended to protect the designated uses of the receiving water as specified in the Basin Plan, and achieve applicable water quality objectives and criteria that are contained in other state plans and policies, or any applicable water quality criteria contained in the CTR and NTR.

The specific procedures for determining reasonable potential and, if necessary, for calculating WQBELs are contained in the Technical Support Document (TSD) for storm water discharges and in the SIP for non-storm water discharges. However, the TSD states that "an analogous approach developed by a regulatory authority can be used to determine the reasonable potential" (for storm water discharges). The Regional Water Board has determined that the procedures for determining reasonable potential and calculating WQBELs contained in the SIP for non-storm water discharges may also be used to evaluate reasonable potential and calculate WQBELs for storm water discharges as well. Hence, in this Order, the Regional Water Board has used the SIP methodology to evaluate reasonable potential for storm water discharges through Discharge Point 001.

## 2. Applicable Beneficial Uses and Water Quality Criteria and Objectives

As noted in Section II of the Limitations and Discharge Requirements, the Regional Water Board adopted a Basin Plan that designates beneficial uses, establishes water quality objectives, and contains implementation programs and policies to achieve those objectives for all waters addressed through the Basin Plan. The beneficial uses applicable to the Dominguez Channel estuary are summarized in Section III.C.1 of this Fact Sheet. The Basin Plan includes both narrative and numeric water quality objectives applicable to the receiving water.

Priority pollutant water quality criteria in the CTR are applicable to the Dominguez Channel estuary. The CTR contains both saltwater and freshwater criteria. Because a distinct separation generally does not exist between freshwater and saltwater aquatic communities, the following apply, in accordance with section 131.38(c)(3), freshwater criteria apply at salinities of 1 part per thousand (ppt) and below at locations where this occurs 95 percent or more of the time. The CTR criteria for saltwater, or human health for consumption of organisms, whichever is more stringent, are used to prescribe the effluent limitations in this Order to protect the

beneficial uses of the Dominguez Channel estuary, a water of the United States in the vicinity of the discharge. The Regional Water Board determined that because the discharge is within the Estuary, saltwater and human health consumption of organism CTR criteria are applicable and the most stringent values were used.

Table F-7 summarizes the applicable water quality criteria/objective for priority pollutants reported in detectable concentrations in the effluent or receiving water. These criteria were used in conducting the RPA for this Order.

**Table F-7. Applicable Water Quality Criteria**

CTR No.	Constituent	Selected Criteria µg/L	CTR/NTR Water Quality Criteria					
			Freshwater		Saltwater		Human Health for Consumption of:	
			Acute µg/L	Chronic µg/L	Acute µg/L	Chronic µg/L	Water & Organisms µg/L	Organisms only µg/L
1	Antimony	4,300	N/A	N/A	--	--	N/A	4,300
2	Arsenic	36			69	36		--
3	Beryllium	No criteria			--	--		Narrative
4	Cadmium	7.31			42.25	9.36		Narrative
5a	Chromium (III)				--	--		Narrative
5b	Chromium (VI)	50.35			1107.75	50.35		Narrative
6	Copper	3.73			5.78	3.73		--
7	Lead	8.52			220.82	8.52		Narrative
8	Mercury	0.051			Reserved	Reserved		0.051
9	Nickel	8.28			74.75	8.28		4,600
10	Selenium	71.14			290.58	71.14		Narrative
11	Silver	2.24			2.24	--		--
12	Thallium	6.30			--	--		6.30
13	Zinc	85.62			95.14	85.62		--
16	2,3,7,8 TCDD	0.000000014			--	--		0.000000014
36	Methylene Chloride	1,600			--	--		1,600
68	Bis(2Ethylhexyl)Phthalate	5.9			--	--		5.9
86	Fluoranthene	370			--	--		370
99	Phenanthrene	No criteria			--	--		--

"N/A" indicates that the water quality criteria for the protection of human health for the consumption of water and organisms are not applicable.

### 3. Determining the Need for WQBELs

In accordance with Section 1.3 of the SIP, the Regional Water Board conducts a reasonable potential analysis (RPA) for each priority pollutant with an applicable criterion or objective to determine if a WQBEL is required in the permit. The Regional Water Board analyzes effluent and receiving water data and identifies the maximum observed effluent concentration (MEC) and maximum background

concentration (B) in the receiving water for each constituent. To determine reasonable potential, the MEC and the B are then compared with the applicable water quality objectives (C) outlined in the CTR, NTR, as well as the Basin Plan. For all pollutants that have a reasonable potential to cause or contribute to an excursion above a state water quality standard, numeric WQBELs are required. The RPA considers water quality criteria from the CTR and NTR, and when applicable, water quality objectives specified in the Basin Plan. To conduct the RPA, the Regional Water Board identifies the MEC and maximum background concentration in the receiving water for each constituent, based on data provided by the Discharger.

Section 1.3 of the SIP provides the procedures for determining reasonable potential to exceed applicable water quality criteria and objectives. The SIP specifies three triggers to complete a RPA:

- 1) Trigger 1 – If the  $MEC \geq C$ , a limit is needed.
- 2) Trigger 2 – If the background concentration (B) > C and the pollutant is detected in the effluent, a limit is needed.
- 3) Trigger 3 – If other related information such as CWA 303(d) listing for a pollutant, discharge type, compliance history, etc. indicates that a WQBEL is required.

Sufficient effluent and receiving water data are needed to conduct a complete RPA. If data are not sufficient, the Discharger will be required to gather the appropriate data for the Regional Water Board to conduct the RPA. Upon review of the data, and if the Regional Water Board determines that WQBELs are needed to protect the beneficial uses, the permit will be reopened for appropriate modification.

The RPA was performed for the priority pollutants regulated in the CTR for which data are available. Three to thirteen sets of discharge data are available for various pollutants discharged through Discharge Point 001. Based on the RPA, pollutants that demonstrate reasonable potential are arsenic, copper, lead, mercury, nickel, selenium, zinc for discharge through Discharge Point 001. Refer to Attachment J for a summary of the RPA and associated effluent limitation calculations.

**Table F-8. Summary Reasonable Potential Analysis**

CTR No.	Constituent	Applicable Water Quality Criteria(C)	Max Effluent Conc. (MEC)	Maximum Detected Receiving Water Conc.(B)	RPA Result - Need Limit?	Reason
		µg/L	µg/L	µg/L		
1	Antimony	4300	<0.18	1.6 <sup>1</sup>	No	MEC<C & B<=C
2	Arsenic	36	61.1	23.4	Yes	MEC>=C
3	Beryllium	No criteria	1.61	0.445 <sup>1</sup>	Uc	No criteria
4	Cadmium	9.36	3	2.7	No	MEC<C & B<=C

CTR No.	Constituent	Applicable Water Quality Criteria(C)	Max Effluent Conc. (MEC)	Maximum Detected Receiving Water Conc.(B)	RPA Result - Need Limit?	Reason
		µg/L	µg/L	µg/L		
5a	Chromium (III)	No criteria	80.7	9.66	No	No criteria
5b	Chromium (VI)	50.35	0.58	6.4 <sup>1</sup>	No	MEC<C & B<=C
6	Copper	3.73	131	18.2	Yes	MEC>=C
7	Lead	8.52	1,070	23.8	Yes	MEC>=C
8	Mercury	0.051	1.34	<0.067	Yes	MEC>=C
9	Nickel	8.28	72.7	3.08	Yes	MEC>=C
10	Selenium	71.14	3.3	15.3	No	MEC<C & B<=C
11	Silver	2.24	<0.08	1.33 <sup>1</sup>	No	MEC<C & B<=C
12	Thallium	6.30	<0.075	2.84 <sup>1</sup>	No	MEC<C & B<=C
13	Zinc	85.62	1,200	145	Yes	MEC>=C
16	2,3,7,8 TCDD	0.000000014	--	0.00000441	Ud	No effluent data & B>C
36	Methylene Chloride	1,600	<0.48	2.5 <sup>1</sup>	No	MEC<C & B<=C
68	Bis(2-Ethylhexyl)Phthalate	5.9	<0.51	2.2 <sup>1</sup>	No	MEC<C & B<=C
86	Fluoranthene	370	<0.76	0.053 <sup>1</sup>	No	MEC<C & B<=C
99	Phenanthrene	No criteria	<0.75	0.021 <sup>1</sup>	Uc	No criteria

Uc = Undertermined due to lack of Water Quality Criteria (c)  
Ud = Undetermined due to lack of Effluent Data (d)

#### 4. WQBEL Calculations

- a. If a reasonable potential exists to exceed applicable water quality criteria or objectives, then a WQBEL must be established in accordance with one or more of the three procedures contained in Section 1.4 of the SIP. These procedures include:
  - i. If applicable and available, use of the wasteload allocation (WLA) established as part of a total maximum daily load (TMDL).
  - ii. Use of a steady-state model to derive maximum daily effluent limitations (MDELs) and average monthly effluent limitations (AMELs).
  - iii. Where sufficient effluent and receiving water data exist, use of a dynamic model, which has been approved by the Regional Water Board.

- b. Water quality based effluent limits (final) for arsenic, copper, lead, mercury, nickel, selenium, and zinc are based on monitoring results and following the procedure based on the steady-state model, available in Section 1.4 of the SIP.
- c. Since many of the streams in the Region have minimal upstream flows, mixing zones and dilution credits are usually not appropriate. Therefore, in this Order, no dilution credit is being allowed. However, in accordance with the reopener provision in Section VI.C.1.e in the tentative Order, this Order may be reopened upon the submission by the Discharger of adequate information to establish appropriate dilution credits or a mixing zone, as determined by the Regional Water Board.
- d. WQBELs Calculation Example

Using nickel as an example, the following demonstrates how WQBELs were established for this Order. The tables in Attachment J summarize the development and calculation of all WQBELs for this Order using the process described below.

#### Concentration-Based Effluent Limitations

A set of AMEL and MDEL values are calculated separately, one set for the protection of aquatic life and the other for the protection of human health. The AMEL and MDEL limitations for aquatic life and human health are compared, and the most restrictive AMEL and the most restrictive MDEL are selected as the WQBEL.

#### *Calculation of aquatic life AMEL and MDEL:*

**Step 1:** For each constituent requiring an effluent limit, identify the applicable water quality criteria or objective. For each criteria determine the effluent concentration allowance (ECA) using the following steady state equation:

$$\begin{aligned} \text{ECA} &= C + D(C-B) \quad \text{when } C > B, \text{ and} \\ \text{ECA} &= C \quad \quad \quad \text{when } C \leq B, \end{aligned}$$

Where      C = The priority pollutant criterion/objective, adjusted if necessary for hardness, pH and translators. In this Order a hardness value of 400 mg/L (as CaCO<sub>3</sub>) was used for development of hardness-dependant criteria, and a pH of 6.9 was used for pH-dependant criteria.  
              D = The dilution credit, and  
              B = The ambient background concentration

As discussed above, for this Order, dilution was not allowed; therefore:

$$\text{ECA} = C$$

For nickel the applicable water quality criteria are (reference Table F-7):

$$\begin{aligned} ECA_{\text{acute}} &= 74.75 \mu\text{g/L} \\ ECA_{\text{chronic}} &= 8.28 \mu\text{g/L} \end{aligned}$$

**Step 2:** For each ECA based on aquatic life criterion/objective, determine the long-term average discharge condition (LTA) by multiplying the ECA by a factor (multiplier). The multiplier is a statistically based factor that adjusts the ECA to account for effluent variability. The value of the multiplier varies depending on the coefficient of variation (CV) of the data set and whether it is an acute or chronic criterion/objective. Table 1 of the SIP provides pre-calculated values for the multipliers based on the value of the CV. Equations to develop the multipliers in place of using values in the tables are provided in Section 1.4, Step 3 of the SIP and will not be repeated here.

$$LTA_{\text{acute}} = ECA_{\text{acute}} \times \text{Multiplier}_{\text{acute } 99}$$

$$LTA_{\text{chronic}} = ECA_{\text{chronic}} \times \text{Multiplier}_{\text{chronic } 99}$$

The CV for the data set must be determined before the multipliers can be selected and will vary depending on the number of samples and the standard deviation of a data set. If the data set is less than 10 samples, or at least 80% of the samples in the data set are reported as non-detect, the CV shall be set equal to 0.6.

For nickel, the following data was used to develop the acute and chronic LTA using equations provided in Section 1.4, Step 3 of the SIP (Table 1 of the SIP also provides this data up to three decimals):

No. of Samples	CV	ECA Multiplier <sub>acute 99</sub>	ECA Multiplier <sub>chronic 99</sub>
13	1.688	0.13	0.24

$$LTA_{\text{acute}} = 74.75 \mu\text{g/L} \times 0.13 = 9.85 \mu\text{g/L}$$

$$LTA_{\text{chronic}} = 8.28 \mu\text{g/L} \times 0.24 = 1.97 \mu\text{g/L}$$

**Step 3:** Select the most limiting (lowest) of the LTA.

$$LTA = \text{most limiting of } LTA_{\text{acute}} \text{ or } LTA_{\text{chronic}}$$

For nickel, the most limiting LTA was the  $LTA_{\text{chronic}}$

$$LTA \ 1.97 \mu\text{g/L}$$

**Step 4:** Calculate the WQBELs by multiplying the LTA by a factor (multiplier). WQBELs are expressed as Average Monthly Effluent Limitations (AMEL) and Maximum Daily Effluent Limitation (MDEL). The multiplier is a statistically based factor that adjusts the LTA for the averaging periods and exceedance frequencies of the criteria/objectives and the effluent limitations. The value of the multiplier varies depending on the probability basis, the coefficient of variation (CV) of the data set, the number of samples (for AMEL) and whether it is a monthly or daily limit. Table 2



of the SIP provides pre-calculated values for the multipliers based on the value of the CV and the number of samples. Equations to develop the multipliers in place of using values in the tables are provided in Section 1.4, Step 5 of the SIP and will not be repeated here.

$$AMEL_{\text{aquatic life}} = LTA \times AMEL_{\text{multiplier 95}}$$

$$MDEL_{\text{aquatic life}} = LTA \times MDEL_{\text{multiplier 99}}$$

AMEL multipliers are based on a 95<sup>th</sup> percentile occurrence probability, and the MDEL multipliers are based on the 99<sup>th</sup> percentile occurrence probability. If the number of samples is less than four (4), the default number of samples to be used is four (4).

For nickel, the following data was used to develop the AMEL and MDEL for aquatic life using equations provided in Section 1.4, Step 5 of the SIP (Table 2 of the SIP also provides this data up to two decimals):

No. of Samples Per Month	CV	Multiplier <sub>MDEL 99</sub>	Multiplier <sub>AMEL 95</sub>
4	1.69	7.59	2.55

$$AMEL_{\text{aquatic life}} = 1.97 \times 2.55 = 5.03 \mu\text{g/L}$$

$$MDEL_{\text{aquatic life}} = 1.97 \times 7.59 = 14.94 \mu\text{g/L}$$

*Calculation of human health AMEL and MDEL:*

**Step 5:** For the ECA based on human health, set the AMEL equal to the ECA<sub>human health</sub>

$$AMEL_{\text{human health}} = ECA_{\text{human health}}$$

For nickel:

$$AMEL_{\text{human health}} = 4,600 \mu\text{g/L}$$

**Step 6:** Calculate the MDEL for human health by multiplying the AMEL by the ratio of the Multiplier<sub>MDEL</sub> to the Multiplier<sub>AMEL</sub>. Table 2 of the SIP provides pre-calculated ratios to be used in this calculation based on the CV and the number of samples.

$$MDEL_{\text{human health}} = AMEL_{\text{human health}} \times (\text{Multiplier}_{\text{MDEL}} / \text{Multiplier}_{\text{AMEL}})$$

For nickel, the following data were used to develop the MDEL<sub>human health</sub>:

No. of Samples Per Month	CV	Multiplier <sub>MDEL 99</sub>	Multiplier <sub>AMEL 95</sub>	Ratio
4	1.69	7.59	2.55	2.97

$$\text{MDEL}_{\text{human health}} = 4,600 \mu\text{g/L} \times 2.97 = 13,667 \mu\text{g/L}$$

**Step 7:** Select the lower of the AMEL and MDEL based on aquatic life and human health as the water-quality based effluent limit for the Order.

For nickel:

AMEL <sub>aquatic life</sub>	MDEL <sub>aquatic life</sub>	AMEL <sub>human health</sub>	MDEL <sub>human health</sub>
5.03 $\mu\text{g/L}$	14.94 $\mu\text{g/L}$	4,600	13,667

The lowest (most restrictive) effluent limits are based on aquatic toxicity and were incorporated into this Order. For arsenic, copper, lead, selenium, and zinc, there are no human health criteria; therefore, the AMEL and MDEL based on aquatic life criteria are established as the WQBELs. For mercury, there are no aquatic life criteria; therefore, the AMEL and MDEL based on the human health criteria are established as the WQBELs. These limits will be protective of aquatic life.

#### 5. WQBELS based on Basin Plan Objectives

The Basin Plan states that the pH of inland surface waters shall not be depressed below 6.5 or raised above 8.5 as a result of waste discharge. Based on the requirements of the Basin Plan an instantaneous minimum limitation of 6.5 and an instantaneous maximum limitation of 8.5 for pH are included in the proposed permit. The Basin Plan lists temperature requirements for the receiving waters and references the Thermal Plan. Based on the requirements of the Thermal Plan and a white paper developed by Regional Water Board staff entitled *Temperature and Dissolved Oxygen Impacts on Biota in Tidal Estuaries and Enclosed Bays in the Los Angeles Region*, a maximum effluent temperature limitation of 86 °F is included in the proposed permit. The white paper evaluated the optimum temperatures for steelhead, topsmelt, ghost shrimp, brown rock crab, jackknife clam, and blue mussel. The new temperature effluent limit is reflective of new information available that indicates that the 100°F temperature is not protective of aquatic organisms. A survey was completed for several kinds of fish and the 86°F temperature was found to be protective.

Based on two positive monitoring results for ammonia, it is identified as having reasonable potential to cause or contribute to an exceedance of WQBELs. Also, 303 (d) list specifies Dominguez Channel Estuary as impaired for ammonia. Therefore, Basin Plan specified limits are included.

#### 6. Whole Effluent Toxicity (WET)

Whole effluent toxicity (WET) protects the receiving water quality from the aggregate toxic effect of a mixture of pollutants in the effluent. WET tests measure the degree of response of exposed aquatic test organisms to an effluent. The WET approach allows for protection of the narrative "no toxics in toxic amounts" criterion while implementing numeric criteria for toxicity. There are two types of WET tests: acute and chronic. An acute toxicity test is conducted over a short time period and

measures mortality. A chronic toxicity test is conducted over a longer period of time and may measure mortality, reproduction, and growth.

The Basin Plan specifies a narrative objective for toxicity, requiring that all waters be maintained free of toxic substances in concentrations that are lethal to or produce other detrimental responses by aquatic organisms. Detrimental response includes but is not limited to decreased growth rate, decreased reproductive success of resident or indicator species, and/or significant alterations in population, community ecology, or receiving water biota. The existing Order contains acute toxicity limitations and monitoring requirements in accordance with the Basin Plan, in which the acute toxicity objective for discharges dictates that the average survival in undiluted effluent for any three consecutive 96-hour static or continuous flow bioassay tests shall be at least 90%, with no single test having less than 70% survival. Annual acute toxicity data submitted by the Discharger in October 2004 indicated 100 percent survival rates. Consistent with Basin Plan requirements, this Order carries over the acute toxicity limitations and monitoring requirements from the previous Order.

In addition to the Basin Plan requirements, Section 4 of the SIP states that a chronic toxicity effluent limitation is required in permits for all discharges that will cause, have the reasonable potential to cause, or contribute to chronic toxicity in receiving waters. The Discharges from the Facility occur only after a significant storm event or after a loading dock fire protection system test. Because the discharge is not continuous, the discharge is not expected to contribute to long-term toxic effects and chronic toxicity monitoring is not required.

## 7. Final WQBELs

### Summary of Water Quality-based Effluent Limitations Discharge Point 001

Table F-9. Summary of Water Quality-based Effluent Limitations

Parameter	Units	Effluent Limitations		
		Maximum Daily	Instantaneous Minimum	Instantaneous Maximum
Arsenic	µg/L	64	--	--
Copper	µg/L	5.8	--	--
Lead	µg/L	15.7	--	--
Mercury	µg/L	0.102	--	--
Nickel	µg/L	15	--	--
Zinc	µg/L	95	--	--
Ammonia	mg/L	1		

1. 1-hour average concentration of un-ionized ammonia of 0.233 mg/L.

## D. Final Effluent Limitations

Section 402(o) of the CWA and section 122.44(l) require that effluent limitations or conditions in reissued Orders be at least as stringent as those in the existing Orders

based on the submitted sampling data. Effluent limitations for pH, temperature, acute toxicity, total suspended solids, turbidity, settleable solids, BOD<sub>5</sub>@ 20°C, oil and grease, sulfides, and phenols are being carried over from the previous Order (Order No. R4-2003-0052). Removal of these numeric limitations would constitute backsliding under CWA section 402(o). The Regional Water Board has determined that these numeric effluent limitations continue to be applicable to the Facility and that backsliding is not appropriate. Effluent limitations for temperature has been revised to reflect WQO changes in the Basin Plan and Thermal Plan. In addition, the effluent limitations for arsenic, copper, lead, mercury, nickel, selenium, and zinc, have been added to this Order because the Facility's discharge was found to have reasonable potential to exceed water quality criteria for these parameters.

### 1. Satisfaction of Anti-Backsliding Requirements

All effluent limitations in this Order are at least as stringent as the effluent limitations in the previous Order.

### 2. Satisfaction of Antidegradation Policy

Section 131.12 requires that the state water quality standards include an anti-degradation policy consistent with the federal policy. The State Water Board established California's antidegradation policy in State Water Board Resolution No. 68-16. Resolution No. 68-16 incorporates the federal antidegradation policy where the federal policy applies under federal law. Resolution No. 68-16 requires that existing water quality be maintained unless degradation is justified based on specific findings. The Regional Water Board's Basin Plan implements, and incorporates by reference, both the State and federal antidegradation policies.

The permitted discharge is consistent with the antidegradation provision of section 131.12 and State Water Board Resolution No. 68-16 and the final limitations in this Order are in compliance with antidegradation requirements and meet the requirements of the SIP because these limits hold the Discharger to performance levels that will not cause or contribute to water quality impairment or further quality degradation that could result from and increase in permitted design flow or a reduction in the level of treatment. This Order does not provide for an increase in the permitted design flow or allow for a reduction in the level of treatment. Further, compliance with these requirements will result in the use of best practicable treatment or control of the discharge. The Order continues the status quo with respect to the level of discharge authorized in the previous permit and thus there will be no change in water quality beyond the level that was authorized in the last permit. Findings authorizing degradation are thus not appropriate.

### 3. Stringency of Requirements for Individual Pollutants

This Order contains both technology-based and water quality-based effluent limitations for individual pollutants. The technology-based effluent limitations consist of restrictions on pH, temperature, total suspended solids, turbidity, settleable solids, BOD<sub>5</sub>@ 20°C, oil and grease, sulfides, and phenols, as discussed in IV.B.2. This

Order's technology-based pollutant restrictions implement the minimum, applicable federal technology-based requirements.

### Summary of Final Effluent Limitations Discharge Point 001

**Table F-10. Summary of Final Effluent Limitations**

Parameter	Units	Effluent Limitations			Basis <sup>1</sup>
		Maximum Daily	Instantaneous Minimum	Instantaneous Maximum	
Temperature <sup>2</sup>	°F	--	--	86	E, BPJ
Turbidity	NTU	75	--	--	E
Settleable solids	ml/L	0.3	--	--	E
Sulfides	mg/L	1.0	--	--	E
Phenols	mg/L	1.0	--	--	E
5 day Biochemical Oxygen Demand (BOD <sub>5</sub> ) @ 20°C	mg/L	30	--	--	E
Oil and Grease	mg/L	15	--	--	E
pH	units	--	6.5	8.5	E
Total Suspended Solids (TSS)	mg/L	75	--	--	E
Arsenic, Total Recoverable	µg/L	64	--	--	CTR, SIP
Copper, Total Recoverable	µg/L	5.8	--	--	CTR, SIP
Lead, Total Recoverable	µg/L	15.7	--	--	CTR, SIP
Mercury, Total Recoverable	µg/L	0.102	--	--	CTR, SIP
Nickel, Total Recoverable	µg/L	15	--	--	CTR, SIP
Zinc, Total Recoverable	µg/L	95	--	--	CTR, SIP
Acute Toxicity <sup>3</sup>	% Survival	4	--	--	E
Ammonia	mg/L	4			Basin Plan, BPJ

<sup>1</sup> E = Existing permit, BPJ = Best Professional Judgement, CTR = California Toxics Rule, SIP = State Implementation Policy.

<sup>2</sup> The maximum temperature of the discharge shall not exceed the natural receiving water temperature by more than 20°F.

<sup>3</sup> The acute toxicity of the effluent shall be such that: (i) the average survival in the undiluted effluent for any three (3) consecutive 96-hour static or continuous flow bioassay tests shall be at least 90%, and (ii) no single test producing less than 70% survival.

<sup>4</sup> 1-hour average concentration of un-ionized ammonia of 0.233 mg/L

#### 4. Mass-based Effluent Limitations

Mass-based effluent limitations are established using the following formula:

$$\text{Mass (lbs/day)} = \text{flow rate (MGD)} \times 8.34 \times \text{effluent limitation (mg/L)}$$

where:      Mass = mass limitation for a pollutant (lbs/day)  
                 Effluent limitation = concentration limit for a pollutant (mg/L)  
                 Flow rate = discharge flow rate (MGD)

#### E. Interim Effluent Limitations

Based on effluent monitoring data submitted by the Discharger, a comparison between the MEC and calculated AMEL values shows that the Discharger may be unable to consistently comply with the AMEL established in this Order for copper, lead, mercury, and zinc. On March 13, 2008, the Discharger requested a compliance schedule of 2 ½ years to comply with the more stringent CTR water quality criteria for these constituents. However, section 5.3 of the SIP, states that a compliance schedule may not exceed 5 years from the date that the permit is issued or reissued, nor may it extend beyond 10 years from the effective date of the SIP (or May 17, 2010) to establish and comply with CTR criterion-based effluent limitations. Further, where a compliance schedule for a final effluent limitation exceeds one year, the Order must include interim numeric limitations for that constituent or parameter. As a result, this Order contains interim limitations for these parameters and a compliance schedule that allows the Discharger up to May 17, 2010, to comply with the final effluent limitations. Within six months after the effective date of this Order, the Discharger must prepare and submit a compliance plan that describes the steps that will be taken to ensure compliance with applicable limitations.

Section 131.38(e) provides conditions under which interim effluent limitations and compliance schedules may be issued. The SIP allows inclusion of an interim limitation with a specific compliance schedule included in an NPDES permit for priority pollutants if the limitation for the priority pollutant is based on CTR criteria and the Discharger demonstrates that it is infeasible to achieve immediate compliance with the effluent limitations. Because based on existing data, it appears that it is infeasible for the Discharger to immediately comply with the CTR-based effluent limitations for copper, lead, mercury, and zinc, an interim effluent limitation and compliance schedule is included in the tentative Order.

Pursuant to the SIP (Section 2.2.1, Interim Requirements under a Compliance Schedule), when compliance schedules are established in an Order, interim limitations must be included based on current treatment facility performance or existing permit limitations, whichever is more stringent to maintain existing water quality. Order No. R4-2003-0052 did not contain effluent limitations for copper, lead, mercury, or zinc; therefore, the maximum effluent concentration (MEC) serves as the basis for the interim effluent limitation. The outlayer monitoring results were eliminated. It should be noted that the Regional Water Board might take appropriate enforcement actions if interim limitations and requirements are not met.

The SIP requires that the Regional Water Board establish other interim requirements such as requiring the discharger to develop a pollutant minimization plan and/or source control measures and participate in the activities necessary to achieve the final effluent limitations. These interim limitations shall be effective until May 17, 2010, after which, the Discharger shall demonstrate compliance with the final effluent limitations.

**Table F-11. Interim Effluent Limitations**

Parameter	Units	Maximum Daily Effluent Limitations
Copper, Total Recoverable	µg/L	29
Lead, Total Recoverable	µg/L	500
Mercury, Total Recoverable	µg/L	1.34
Zinc, Total Recoverable	µg/L	1,200

## V. RATIONALE FOR RECEIVING WATER LIMITATIONS

### A. Surface Water

The Basin Plan contains numeric and narrative water quality objectives applicable to all surface waters within the Los Angeles Region. Water quality objectives include an objective to maintain the high quality waters pursuant to federal regulations (section 131.12) and State Water Board Resolution No. 68-16. Receiving water limitations in this Order are included to ensure protection of beneficial uses of the receiving water and are based on the water quality objectives contained in the Basin Plan.

In addition to other narrative limitations, the previous Order contained receiving water limitations for pH, temperature, dissolved oxygen, and dissolved sulfide that are included in this permit.

## VI. RATIONALE FOR MONITORING AND REPORTING REQUIREMENTS

Section 122.48 requires that all NPDES permits specify requirements for recording and reporting monitoring results. Water Code sections 13267 and 13383 authorizes the Regional Water Board to require technical and monitoring reports. The Monitoring and Reporting Program (MRP), Attachment E of this Order, establishes monitoring and reporting requirements to implement federal and state requirements. The following provides the rationale for the monitoring and reporting requirements contained in the MRP for this facility.

### A. Effluent Monitoring

Monitoring for those pollutants expected to be present in the Monitoring Locations EFF-001 will be required as documented in the proposed MRP (Attachment E) Table E-2. To determine compliance with effluent limitations, the proposed monitoring plan carries forward monitoring requirements from previous R4-2003-0052, with some modifications. In the proposed permit, monitoring requirements for flow, pH, temperature, oil and grease, BOD<sub>5</sub> 20°C, total suspended solids, settleable solids, turbidity, sulfides,

phenols, detergents (MBAS), dissolved oxygen, conductivity, total organic carbon, ammonia (as N), arsenic, copper, lead, mercury, nickel, selenium, zinc, methyl tertiary butyl ether (MTBE), tertiary butyl alcohol (TBA), total petroleum hydrocarbons (both gasoline and diesel fractions), xylene, and priority pollutants are carried over from the previous permit. For these parameters, monitoring for the pollutants are performed once per discharge event. At a minimum, annual monitoring is required to characterize the discharge for future analysis.

According to the SIP, the Discharger is required to monitor the effluent for the CTR priority pollutants, to determine reasonable potential. Accordingly, the Regional Water Board is requiring that the Discharger conduct effluent monitoring of the CTR priority pollutants. The previous permit listed other priority pollutants (benzene, toluene, ethylbenzene, carbon tetrachloride, tetrachloroethylene, trichloroethylene, vinyl chloride, 1,4-dichlorobenzene, 1,1-dichloroethane, 1,2-dichloroethane, 1,1-dichloroethylene, 1,3-dichlorobenzene, antimony, beryllium, cadmium, chromium (III and VI), silver, and thallium) with the required sampling frequency of once per discharge event. The monitoring requirements and frequencies of these pollutants in the proposed MRP are reduced to once per year with the other priority pollutants.

The Discharger indicated in section V of USEPA Form 2C that cresol, methyl mercaptan, naphthenic acid, xylene, and cyclohexane (components of crude petroleum and/or some refined products) are known or there is reason to believe to be discharged or may be discharged from any outfall. These parameters are added to the proposed MRP to accurately characterize the effluent.

#### B. Whole Effluent Toxicity Testing Requirements

Whole effluent toxicity (WET) protects the receiving water quality from the aggregate toxic effect of a mixture of pollutants in the effluent. An acute toxicity test is conducted over a short time period and measures mortality. This Order includes limitations for acute toxicity, and therefore, monitoring requirements are included in the MRP to determine compliance with the effluent limitations established in Limitations and Discharge Requirements, Effluent Limitations, Section IV.A.1.b.

Section 4 of the SIP states that a chronic toxicity effluent limitation is required in permits for all discharges that will cause, have the reasonable potential to cause, or contribute to chronic toxicity in receiving waters. The chronic toxicity test is conducted over a longer period of time and may measure mortality, reproduction, and growth. These effects are usually associated with continuous discharges. This discharge occurs infrequently over a short period of time. Therefore, this Order does not include requirements for chronic toxicity testing.

#### C. Receiving Water Monitoring

##### 1. Surface Water

###### a. Monitoring Location RSW-001

According to the SIP, the Discharger is required to monitor the upstream receiving water for the CTR priority pollutants, to determine reasonable potential. Accordingly,



the Regional Water Board is requiring that the Discharger conduct upstream receiving water monitoring of the CTR priority pollutants at Monitoring Location RSW-001, 50 feet upstream from the discharge point of the storm drain to the receiving water, the Dominguez Channel estuary. The Discharger must analyze temperature, pH, and hardness of the upstream receiving water at the same time the samples are collected for priority pollutants analysis.

b. Monitoring Location RSW-002

This Order includes receiving water limitations and therefore, monitoring requirements are included in the MRP to determine compliance with the receiving water limitations established in Limitations and Discharge Requirements, Receiving Water Limitations, Section V.A. Monitoring for pH, temperature, dissolved oxygen, and dissolved sulfide in the downstream receiving water in the vicinity of the discharge point of the storm drain to the receiving water, the Dominguez Channel estuary, is included in the proposed permit. The Facility is also required to perform general observations of the receiving water when discharges occur and report the observations in the monitoring report. Attention shall be given to the presence or absence of: floating or suspended matter, discoloration, aquatic life, visible film, sheen or coating, and fungi, slime, or objectionable growths.

D. Other Monitoring Requirements

Not applicable.

## VII. RATIONALE FOR PROVISIONS

A. Standard Provisions

Standard Provisions, which apply to all NPDES permits in accordance with section 122.41, and additional conditions applicable to specified categories of permits in accordance with section 122.42, are provided in Attachment D. The discharger must comply with all standard provisions and with those additional conditions that are applicable under section 122.42.

Section 122.41(a)(1) and (b) through (n) establish conditions that apply to all State-issued NPDES permits. These conditions must be incorporated into the permits either expressly or by reference. If incorporated by reference, a specific citation to the regulations must be included in the Order. Section 123.25(a)(12) allows the state to omit or modify conditions to impose more stringent requirements. In accordance with section 123.25, this Order omits federal conditions that address enforcement authority specified in sections 122.41(j)(5) and (k)(2) because the enforcement authority under the Water Code is more stringent. In lieu of these conditions, this Order incorporates by reference Water Code section 13387(e).

## B. Special Provisions

### 1. Reopener Provisions

These provisions are based on section 123 and the previous Order. The Regional Water Board may reopen the permit to modify permit conditions and requirements. Causes for modifications include the promulgation of new federal regulations, modification in toxicity requirements, or adoption of new regulations by the State Water Board or Regional Water Board, including revisions to the Basin Plan.

### 2. Special Studies and Additional Monitoring Requirements

- a. Initial Investigation Toxicity Reduction Evaluation Workplan. This provision is based on section 4 of the SIP, Toxicity Control Provisions.

### 3. Best Management Practices and Pollution Prevention

Section 122.44(k) includes requirements for the discharger to develop. This permit includes these requirements.

- a. This provision is based on section 122.44(k) and the previous Order (R4-2003-0052) and includes the requirement to update and implement a Storm Water Pollution Prevention Plan (SWPPP), a Best Management Practices Plan (BMPP) and a Spill Contingency Plan.
- b. According to the SIP, pollution prevention measures may be particularly appropriate for persistent bioaccumulative priority pollutants where there is evidence that beneficial uses are being impacted. This permit also requires that the Discharger develop and implement a Pollution Minimization Plan for TCDD-equivalents. Pursuant to section 2.4.5.1 of the SIP, pollution minimization includes: monitoring for potential sources of the pollutants, periodic monitoring, control strategy, control measure implementation, and an annual status report sent to the Regional Water Board.

### 4. Construction, Operation, and Maintenance Specifications

This provision is based on the requirements of section 122.41(e) and the previous Order.

### 5. Other Special Provisions

Not applicable.

### 6. Compliance Schedules

This provision is based on the SIP, Section 2.1, Compliance Schedules. CTR's Compliance Schedule provisions sunset on May 18, 2005. After this date, the provisions of the SIP allow for Compliance Schedules not to exceed 5 years from issuance or past May 1, 2010, whichever is sooner. The Discharger is required to develop and submit a Compliance Plan.

According to the SIP, pollution prevention measures may be particularly appropriate for persistent bioaccumulative priority pollutants where there is evidence that beneficial uses are being impacted. This permit also requires that the Discharger develop and implement a Pollution Minimization Plan for regulated priority pollutants. Pursuant to section 2.4.5.1 of the SIP, pollution minimization includes: monitoring for potential sources of the pollutants, periodic monitoring, control strategy, control measure implementation, and an annual status report sent to the Regional Water Board.

## **VIII. PUBLIC PARTICIPATION**

The California Regional Water Quality Control Board, Los Angeles Region (Regional Water Board) is considering the issuance of waste discharge requirements (WDRs) that will serve as a National Pollutant Discharge Elimination System (NPDES) permit for the Olympic Tank Farm. As a step in the WDR adoption process, the Regional Water Board staff has developed tentative WDRs. The Regional Water Board encourages public participation in the WDR adoption process.

### **A. Notification of Interested Parties**

The Regional Water Board has notified the Discharger and interested agencies and persons of its intent to prescribe waste discharge requirements for the discharge and has provided them with an opportunity to submit their written comments and recommendations.

### **B. Written Comments**

The staff determinations are tentative. Interested persons are invited to submit written comments concerning these tentative WDRs. Comments must be submitted either in person or by mail to the Executive Office at the Regional Water Board at the address above on the cover page of this Order.

To be fully responded to by staff and considered by the Regional Water Board, written comments must be received at the Regional Water Board offices by 5:00 p.m. on April 18, 2008.

### **C. Public Hearing**

The Regional Water Board will hold a public hearing on the tentative WDRs during its regular Board meeting on the following date and time and at the following location:

Date: November 20, 2008  
Time: 9:00 A.M.  
Location: Metropolitan Water District of Southern California, Board Room  
700 North Alameda Street, Los Angeles, California.

Interested persons are invited to attend. At the public hearing, the Regional Water Board will hear testimony, if any, pertinent to the discharge, WDRs, and permit. Oral testimony will be heard; however, for accuracy of the record, important testimony should be in writing.

Please be aware that dates and venues may change. The current agenda for changes in dates and locations is available at <http://www.waterboards.ca.gov/losangeles>.

#### D. Nature of Hearing

This will be a formal adjudicative hearing pursuant to section 648 et seq. of title 23 of the California Code of Regulations. Chapter 5 of the California Administrative Procedure Act (commencing with section 11500 of the Government Code) will not apply to this proceeding.

*Ex Parte Communications Prohibited:* As a quasi-adjudicative proceeding, no board member may discuss the subject of this hearing with any person, except during the public hearing itself. Any communications to the Regional Board must be directed to staff.

#### E. Parties to the Hearing

The following are the parties to this proceeding:

1. The applicant/permittee
2. Regional Board Staff

Any other persons requesting party status must submit a written or electronic request to staff not later than [20] business days before the hearing. All parties will be notified if other persons are so designated.

#### F. Public Comments and Submittal of Evidence

Persons wishing to comment upon or object to the tentative waste discharge requirements, or submit evidence for the Board to consider, are invited to submit them in writing to the above address. To be evaluated and responded to by staff, included in the Board's agenda folder, and fully considered by the Board, written comments must be received no later than close of business on April 18, 2008. Comments or evidence received after that date will be submitted, ex agenda, to the Board for consideration, but only included in administrative record with express approval of the Chair during the hearing. Additionally, if the Board receives only supportive comments, the permit may be placed on the Board's consent calendar, and approved without an oral testimony.

#### G. Hearing Procedure

The meeting, in which the hearing will be a part of, will start at 9:00 a.m. Interested persons are invited to attend. Staff will present the matter under consideration, after which oral statements from parties or interested persons will be heard. For accuracy of the record, all important testimony should be in writing. The Board will include in the administrative record written transcriptions of oral testimony that is actually presented at the hearing. Oral testimony may be limited to 30 minutes maximum or less for each speaker, depending on the number of persons wishing to be heard. Parties or persons with similar concerns or opinions are encouraged to choose one representative to

speak. At the conclusion of testimony, the Board will deliberate in open or close session, and render a decision.

Parties or persons with special procedural requests should contact staff. Any procedure not specified in this hearing notice will be waived pursuant to section 648(d) of title 23 of the California Code of Regulations. Objections to any procedure to be used during this hearing must be submitted in writing not later than close of 15 business days prior to the date of the hearing. Procedural objections will not be entertained at the hearing.

#### H. Waste Discharge Requirements Petitions

Any aggrieved person may petition the State Water Resources Control Board to review the decision of the Regional Water Board regarding the final WDRs. The petition must be submitted within 30 days of the Regional Water Board's action to the following address:

State Water Resources Control Board  
Office of Chief Counsel  
P.O. Box 100, 1001 I Street  
Sacramento, CA 95812-0100

#### I. Information and Copying

The Report of Waste Discharge (RWD), related documents, tentative effluent limitations and special provisions, comments received, and other information are on file and may be inspected at the address above at any time between 8:30 a.m. and 4:45 p.m., Monday through Friday. Copying of documents may be arranged through the Regional Water Board by calling (215) 576-6600.

#### J. Register of Interested Persons

Any person interested in being placed on the mailing list for information regarding the WDRs and NPDES permit should contact the Regional Water Board, reference this facility, and provide a name, address, and phone number.

#### K. Additional Information

Requests for additional information or questions regarding this order should be directed to Mazhar Ali at (213) 576-6652.

## **ATTACHMENT G – STORM WATER POLLUTION PREVENTION PLAN REQUIREMENTS**

### **I. Implementation Schedule**

A storm water pollution prevention plan (SWPPP) shall be developed and submitted to the Regional Water Board within 90 days following the adoption of this Order. The SWPPP shall be implemented for each facility covered by this Permit within 10 days of approval from the Regional Water Board, or 6-months from the date of the submittal of the SWPPP to the Regional Water Board (whichever comes first).

### **II. Objectives**

The SWPPP has two major objectives: (a) to identify and evaluate sources of pollutants associated with industrial activities that may affect the quality of storm water discharges and authorized non-storm water discharges from the facility; and (b) to identify and implement site-specific best management practices (BMPs) to reduce or prevent pollutants associated with industrial activities in storm water discharges and authorized non-storm water discharges. BMPs may include a variety of pollution prevention measures or other low-cost and pollution control measures. They are generally categorized as non-structural BMPs (activity schedules, prohibitions of practices, maintenance procedures, and other low-cost measures) and as structural BMPs (treatment measures, run-off controls, overhead coverage.) To achieve these objectives, facility operators should consider the five phase process for SWPPP development and implementation as shown in Table A.

The SWPPP requirements are designed to be sufficiently flexible to meet the needs of various facilities. SWPPP requirements that are not applicable to a facility should not be included in the SWPPP.

A facility's SWPPP is a written document that shall contain a compliance activity schedule, a description of industrial activities and pollutant sources, descriptions of BMPs, drawings, maps, and relevant copies or references of parts of other plans. The SWPPP shall be revised whenever appropriate and shall be readily available for review by facility employees or Regional Water Board inspectors.

### **III. Planning and Organization**

#### **A. Pollution Prevention Team**

The SWPPP shall identify a specific individual or individuals and their positions within the facility organization as members of a storm water pollution prevention team responsible for developing the SWPPP, assisting the facility manager in SWPPP implementation and revision, and conducting all monitoring program activities required in Attachment E of this Permit. The SWPPP shall clearly identify the Permit related responsibilities, duties, and activities of each team member. For small facilities, storm water pollution prevention teams may consist of one individual where appropriate.